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EXAMINER	
RASHID, DAVID	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/763,129	THAKUR, KHAGESHWAR	
	Examiner	Art Unit	
	David P. Rashid	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,13-18 and 20-23* is/are rejected.

7)☒ Claim(s) *11-12, 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/22/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Drawings

1. The following is a quote from 37 CFR 1.84(p)(3):

> When necessary, such as indicating a surface or cross section, a reference character may be underlined and a blank space may be left in the hatching or shading where the character occurs so that is appears distinct.

2. FIG. 1 and FIG. 11 are objected to under 37 CFR 1.84(p)(3) for failing to properly underline – it is suggested to remove the underline from element 10 in FIG. 1 and element 150 in FIG. 11.

3. FIG. 7 is objected to under 37 CFR 1.83(a) because they fail to show the exemplary grayscale photograph as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

4. The following is a quote from 37 CFR 1.84(h):

> All views of the drawing must be grouped together and arranged on the sheet(s) without wasting space, preferably in an upright position, clearly separated from one another, and must not be included in the sheets containing the specifications, claims, or abstract.

5. The drawings are objected to under 37 CFR 1.84(h) for failing to group together and arrange on sheets without wasting space – it is suggest to pair up FIG. 1 and FIG. 2, FIG. 3 and FIG. 4, FIG. 10 and FIG. 11, FIG. 12 and FIG. 13, and FIG. 6A and FIG. 6B.

6. FIG. 3 is objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the specification: "30".

7. FIG. 12 and FIG. 13 are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference characters not mentioned in the specification: "168" and "185".

8. The following is a quote from 37 CFR 1.84(b)(2):

> The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

9. Color photographs and color drawings are not accepted unless a petition filed under 37 CFR 1.84(a)(2) is granted. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification: The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings and black and white photographs have been satisfied. See 37CFR 1.84(b)(2).

10. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

11. The disclosure is objected to because of the following informalities:

(i) Page 1, paragraph [0001] does not properly incorporate by reference the application entitled "CONTROLLED MOVING WINDOW ADAPTIVE HISTOGRAM EQUALIZATION".

Appropriate correction is required.

Claim Objections

12. 37 CFR 1.75(a) reads as follows:

> The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

13. **Claims 6 – 9, 12,** and **14 – 19** are objected to under 37 CFR 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his/her invention as follows:

(i) Claim 6, line 1 cites "training process" that lacks antecedent basis – it is suggested to depend claim 6 from claim 5 where the training process is first introduced.

(ii) Claim 7, line 1 cites "known classifications" that lacks antecedent basis – it is suggested to depend claim 7 from claim 6 where the known classifications are first introduced.

(iii) Claim 8, line 1 cites "concentration ratio for each image in the set of images" that lacks antecedent basis – it is suggested to depend claim 8 from claim 7 where the known concentration ratio for each image in the set of images is first introduced.

(iv) Claim 9, line 1 cites "one or more classification thresholds" that lacks antecedent basis – it is suggested to depend claim 9 from claim 5 where the known one or more classification thresholds are first introduced.

(v) Claim 10, line 2 cites "one or more classification thresholds" that lacks antecedent basis – it is suggested to depend claim 10 from claim 5 where the known one or more classification thresholds are first introduced.

(vi) Claim 12, line 1 cites variable "n" that lacks antecedent basis – it is suggested to depend claim 12 from claim 11 where the variable "n" is first introduced.

(vii) Claims 14 – 19 all refer to "[a]n image classifying processor…" wherein the claim from which they depend (claim 1) is "[a] method" – it is suggested to depend claims 14 – 19 from claim 13 where the preamble is supported.

(viii) Claims 10 and 18 are unclear in the conditional "if then" statements, meaning that there exists an "if" but no "then" or symbol "➔" which may cause confusion – it is suggested to add the word "then" or symbol "➔" (e.g. "If (CR < T), <u>then</u> image type = text").

Claim Rejections - 35 USC § 112

14. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

15. **Claims 11, 12,** and **19** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for equation (3) if level L is within the range from 0 to 255, does not reasonably provide enablement for equation (3) if level L is not within the range from 0 to 255. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to enable the invention commensurate in scope with these claims.

The level L range is not specified in equation (3), meaning that if the range was between levels [130, 140] and there existed no pixels with those values, the levels between [130,140] would have values of 0. If all values in the summation on the denominator are zero, the denominator itself would be zero which is an improper fraction. There exist other similar complications with the level L range extends to infinity.

It is suggested to place "L=0" at the bottom of the summation symbols and "L=255" at the top of the summation symbols.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. **Claims 1 – 4, 13 – 16,** and **22 - 23** are rejected under 35 U.S.C. 102(b) as being anticipated by Scherl et al. (US 4,411,015 A).

Regarding **claim 1**, Scherl discloses a method of classifying (Col. 1, lines 40 – 44; FIG. 1) an image (FIG. 1, element D), the method comprising:

obtaining an image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D);

determining one or more classification thresholds ("t" in Col. 3, lines 30 – 32);

determining the concentration ratio ("K" in Col. 3, lines 16 - 28) for the image;

comparing the concentration ratio to at least one of the one or more classification thresholds ("less than" and "greater than or equal" in Col. 3, lines 33 - 36); and

classifying the image ("image area" and "text area" in Col. 3, lines 33 - 36) based on the comparison of the concentration ratio to at least one of the one or more classification thresholds.

Regarding **claim 2**, Scherl discloses the method as claimed in claim 1 wherein determining the concentration ratio ("K" in Col. 3, lines 16 - 28) for the image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D) includes determining the luminance components of pixels ("brightness" in Col. 3, lines 16 – 28 wherein luminance is used in the video industry to characterize the brightness of displays) in the image.

Regarding **claim 3**, Scherl discloses the method as claimed in claim 1 wherein determining the concentration ratio ("K" in Col. 3, lines 16 - 28) for the image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D) includes determining the grayscale components ("grayscale value" in Col. 3, lines 16 - 28) of the image.

Regarding **claim 4**, Scherl discloses the method as claimed in claim 1 wherein determining the concentration ratio ("K" in Col. 3, lines 16 - 28) for the image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D) includes generating a histogram (FIG. 2; FIG. 3; "histograms" in Col. 3, lines 12 - 16) for the image.

Regarding **claim 13**, claim 1 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 13. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 13.

Regarding **claim 14**, claim 2 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 14. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 14.

Regarding **claim 15**, claim 3 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 15. Thus, references/arguments equivalent to those presented above for claim 3 are equally applicable to claim 15.

Regarding **claim 16**, claim 4 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 16. Thus, references/arguments equivalent to those presented above for claim 4 are equally applicable to claim 16.

Regarding **claim 22**, claim 1 recites identical features as in the image processing system (FIG. 1) of claim 22. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 22.

Regarding **claim 23**, claim 1 recites identical features as in the computer-readable medium containing instructions (Col. 2, lines 28 – 31; FIG. 1, elements S, R wherein the computer R needs instructions to perform the actions cited in Col. 2, lines 28 – 31) for processing an image (FIG. 1, element D) of claim 23. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 23.

18. **Claims 20** and **21** is rejected under 35 U.S.C. 102(b) as being anticipated by Poggio et al. (US 5,642,431 A).

Regarding claim 20, Poggio discloses a method of processing an image (FIG. 1), the method comprising:

capturing an image (FIG. 1, element 102) of an object (FIG. 1, element 101);

classifying the image (FIG. 1, element 106) in a class (Col. 3, lines 29 – 34 wherein the class is images with the a face detected) using a concentration ratio (a threshold must exist for the image classifier 106 to detect the presence of the face, that threshold being the "concentration ratio");

using the class to modify the operation (FIG. 3, element 106; "neural network" in Col. 6, lines 40 – 47) of an image capturing device (FIG. 1, element 100 including elements 102 and 106); and

applying controlled, equalization (FIG. 4, element 405) to an image generated by the image capture device (FIG. 4, element 401) where the controlled, histogram equalization uses (the controlled, histogram equalization step 405 uses the concentration ratio in that the obtained sample face patterns of step 401 used the concentration ratio to determine that they were in face images with detected faces) a concentration ratio.

Regarding **claim 21**, Poggio discloses an image processing system (FIG. 1) comprising:

an image capture device (FIG. 1, element 102);

an image classifier (FIG. 1, element 106) coupled to the image capture device in a feedback loop (FIG. 3, element 106; "neural network" in Col. 6, lines 40 – 47); and

a controlled, equalization (FIG. 4, element 405) processor (FIG. 1, element 110) coupled to the image capture device.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. **Claims 5 - 10** and **17 - 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherl et al. (US 4,411,015 A) in view of Hartmann et al. (US 2002/0067857 A1).

Regarding **claim 5**, while Scherl discloses the method as claimed in claim 1, Scherl does not teach wherein determining one or more classification thresholds includes a training process.

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches determining one or more classification thresholds (FIG. 7, element 860; "one or more predetermined classification parameters" in paragraph [0120]) by including a training process (paragraph [0068], FIG. 7; "The classification determination uses a trained model." in paragraph [0120]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for determining the one or classification thresholds of Scherl to include a training process as taught by Hartmann as "[t]he method classifies the training images from at least one operating parameter 840, yielding overall accuracy.", Hartmann, paragraph [0068] and "...to improve the accuracy of the classification of the second group of images.", Hartmann, paragraph [0120].

Regarding **claim 6**, while Scherl in view of Hartmann disclose the method as claimed in claim 5, Scherl in view of Hartmann do not teach wherein the training process includes analyzing a set of images having known classifications.

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches wherein a training process (paragraph [0068], FIG. 7; "The classification determination uses a trained model." in paragraph [0120]) includes analyzing a set of images having known classifications ("known classification" in paragraph [0120]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for determining the one or classification thresholds of Scherl wherein a training process includes analyzing a set of images having known classifications as taught by Hartmann

"...to improve the accuracy of the classification of the second group of images.", Hartmann, paragraph [0120].

Regarding **claim 7**, while Scherl in view of Hartmann disclose the method as claimed in claim 6, Scherl in view of Hartmann do not disclose wherein analyzing a set of images having known classifications includes determining a concentration ratio for each image in the set of images.

Scherl discloses wherein analyzing images ("video" in FIG. 1) includes determining a concentration ratio ("K" in Col. 3, lines 16 - 28) for each image in the set of images.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the set of images having known classifications as taught by Scherl in view of Hartmann to include determining a concentration ratio for each image in the set of images as taught by Scherl "...to provide a method and apparatus for automatic recognition of image and text/graphics areas on a master which automatically separates such different information-containing areas and classified the separated areas properly.", Scherl, Col. 1, 40 – 44.

Regarding **claim 8**, while Scherl in view of Hartmann in claim 7 disclose the method as claimed in claim 7, Scherl in view of Hartmann do not disclose wherein determining the concentration ratio for each image in the set of images includes generating a histogram for each image.

Scherl discloses wherein determining the concentration ratio ("K" in Col. 3, lines 16 - 28) for each image in the set of images ("video" in FIG. 1) includes generating a histogram (FIG. 2; FIG. 3; "histograms" in Col. 3, lines 12 - 16) for each image.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the set of images having known classifications and determined concentration ratios as taught by Scherl in view of Hartmann in claim 7 to include generating a histogram of each image as taught by Scherl "...to provide a method and apparatus for automatic recognition of image and text/graphics areas on a master which automatically separates such different information-containing areas and classified the separated areas properly.", Scherl, Col. 1, 40 – 44.

Regarding **claim 9**, while Scherl in view of Hartmann disclose the method as claimed in claim 5, and while Sherl discloses wherein determining one or more classification thresholds ("t" in Col. 3, lines 30 – 32) includes determining a threshold for text images ("t" in Col. 3, lines 30 – 36) and a threshold for other images ("t" in Col. 3, lines 30 – 36), Sherl does not teach wherein the other images are photographic images (since other images do not necessarily include photographic images).

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches classifying photographic images ("digital photos" in paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the other image group of Scherl to be photographic images as taught by Hartmann so that "[t]he class of natural images encompasses all images taken from nature.", Hartmann, paragraph [0036].

Regarding **claim 10**, while Scherl in view of Hartmann disclose the method as claimed in claim 5, and while Scherl discloses wherein classifying the image based on the comparison of the

concentration ratio to at least one of the one or more classification thresholds is performed according to the following:

If (CR<T), then image type = text (Col. 3, lines 33 – 36 such that the inequality is negated)

If (T≤CR<P), then image type = graphic

If (P≤CR), then image type = other image (Col. 3, lines 33 – 36 such that the inequality is negated)

where CR is a concentration ratio ("K" in Col. 3, lines 16 - 28) of the image, T is a threshold for text images ("t" in Col. 3, lines 30 – 36) and P is a threshold for photographic images ("t" in Col. 3, lines 30 – 36), Sherl does not teach wherein the other images are photographic images (since other images do not necessarily include photographic images).

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches classifying photographic images ("digital photos" in paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the other image group of Scherl to be photographic images as taught by Hartmann so that "[t]he class of natural images encompasses all images taken from nature.", Hartmann, paragraph [0036].

It must be noted that the negation of the inequalities in Col. 3, lines 33 – 36 of Scherl are then equivalent to those of the examined application. Since variable K of Scherl (concentration ratio CR) is between 0 and 1, the negation could either be [1] the simple result of inversion of K (1/K) or [2] the subtraction of K from 1 (1 – K). It is shown that without mathematical negation, Scherl achieves the same result as the examined application in that either

above/below the threshold in comparison to the concentration ratio gives a text image, and that the opposite will be the other image (photographic image as further taught by Hartmann).

Regarding **claim 17**, while Scherl discloses an image classifying processor as claimed in ciam 13 and while Scherl discloses wherein the processor includes a memory (FIG. 1, element S) and the memory includes (The only memory disclosed in Scherl is element S, thus the thresholds for the text and photographic images must be in element S.) a threshold for text images ("t" in Col. 3, lines 30 – 36), and threshold for other images ("t" in Col. 3, lines 30 – 36), Sherl does not teach wherein the other images are photographic images (since other images do not necessarily include photographic images).

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches classifying photographic images ("digital photos" in paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the other image group of Scherl to be photographic images as taught by Hartmann so that "[t]he class of natural images encompasses all images taken from nature.", Hartmann, paragraph [0036].

Regarding **claim 18**, claim 10 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 18. Thus, references/arguments equivalent to those presented above for claim 10 are equally applicable to claim 18.

Double Patenting

21. **Claim 1** of the examined application (of which will be referred to as '385) is provisionally rejected as on the ground of nonstatutory obviousness-type double patenting as

being unpatentable over claim 1 of copending Application No. 10/224660 (of which will be referred to as '660) Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

Regarding **claim 1** of '385, claim 1 of '660 discloses a method of classifying an image ("image processing system" of '660), the method comprising:

obtaining an image ("receive image data" of '660);

determining one or more classification thresholds ("intensity threshold" of '660);

determining the concentration ratio ("intensity value" of '660) for the image;

comparing the concentration ratio to at least one of the one or more classification thresholds ("comparing an intensity value associated with each pixel with an intensity threshold" of '660); and

classifying the image ("determining whether each pixel is a background pixel" of '660) based on the comparison of the concentration ratio to at least one of the one or more classification thresholds.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

22. **Claims 11, 12** and **19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **claims 11, 12,** and **19**, while the prior art teaches determining a concentration ratio for an image, the prior art does not teach wherein determining the concentration ratio for the image includes determining the concentration ratio according to the following

$$CR=\left(\sum_{L} P_L\right)^{n} \Big/ \left(\sum_{L} P_L^{n}\right)$$

where CR is a concentration ratio, n is grater than 1, and P_L is a population at a level L.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

David P Rashid
Examiner
Art Unit 2624

/Brian P. Werner/
Supervisory Patent Examiner (SPE), Art Unit 2624